Design safety for decorated iron stairs used in architecture

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Abstract:
The stairs provide a means of ascent or descent. Stairways need to be protected by a stair rails to prevent the chances of falling. Major cause of stair-related injuries is poor design and construction of stair rails that affect the user’s gait and visual attention. The stair rails to a variety of potentially hazardous characteristics, including riser height irregularity. Stair rails must be designed to resist the loads they are likely to experience throughout their lives without collapsing or becoming unstable and without deflecting unacceptably, causing a loss of amenity. The barrier must also be sufficiently durable, without the need for reconstruction. Changed many of the standards previously agreed upon from the industry. While bad design is the most commonly cited reason for stairway fall injuries, other reasons cited include user behavior. The problem, stair rails fall injuries prevention efforts are clearly warranted. So the research role of evaluating design features and identifying potential hazards in contemporary stair rails. Therefore, the aim of research is that design practices and how this information can be used in research and practice to improve stair safety to identify aspects of stair rails designs. This research studied nine axis: material, kind of stairs, Hazards Along Inadequate Stairs Railing, The decorative iron spiral stairways, Support of stair rails elderly, handicapped and children, Openings in stair rails Supports (For Children), Interactive stairways and stair rails, Stair rails height requirements and Analysis of safe stair railing. The main results of this study show that, it Should the education and awareness on stair rails safety, designers will take more interest in designing safer stair rails that at the same time are attractive and innovative.

Keywords:
- Stair rails
- Handrail
- Decorative wrought iron
- Injuries
- Children
- Elders
- Safety

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